

IN THE CLAIMS:

The following listing of claims will replace all prior versions, and listings, of the claims in the application:

1-11. (Canceled)

12. (Currently amended) An apparatus for providing power to a model vehicle, the apparatus comprising:

a control knob configured to be rotated by a user over a range of positions;

a light source;

a sensing element in communication with the control knob and configured to detect a speed of rotation of the knob over a period of about 50 milliseconds or less, the sensing element comprising an a first optical detector and a second optical detector;

a rotatable disk in communication with the knob and intervening between the light source and the ~~optical detector~~ first and second optical detectors, wherein the first and second optical detectors are positioned at different locations along an outer circumference of the disk; and

a processor in electrical communication with the sensing element, the processor configured to (1) correlate knob rotational speed with a magnitude of power provided from a power source to a model vehicle by multiplying a distance of rotation of the knob by a factor based upon speed of knob rotation and (2) detect a direction of knob rotation based upon a phase difference between electrical signals produced from the first and second optical detectors.

13. (Canceled)

14. (Currently Amended) The apparatus of claim 12, wherein the processor is configured to generate the factor proportional to the speed of knob rotation.

15. (Currently amended) The apparatus of claim 12, wherein the rotatable disk ~~including~~ comprises gaps spaced at regular angular increments to allow optical communication between the light source and the ~~detector~~ first and second optical detectors, wherein the processor is configured to detect knob rotation speed based upon a rate of changed transmission of light.

16. (Canceled)

17. (Currently amended) The apparatus of claim 12, wherein the rotatable disk ~~including~~ comprises reflecting elements spaced at regular angular increments to allow optical communication between the light source and the detector, wherein the processor is configured to detect knob rotation speed based upon a rate of changed reflection of light.

18. (Canceled)

19. (Previously presented) The apparatus of claim 12 further comprising an antenna configured to allow the processor to communicate with the power source through a wireless signal.

20. (Previously presented) The apparatus of claim 12 further comprising a wired communication link between the processor and the power source.